



- 1 A pizza restaurant conducted a survey to determine which pizza topping was preferred by its customers. The results are shown in the table.

Favorite Pizza Topping

Topping	Frequency
Pepperoni	170
Sausage	115
Hamburger	85
Cheese	130
Mushroom	100

Which of the following statements is NOT a valid conclusion from this table?

- A One-fourth of the customers prefer cheese as their favorite topping.
- B Twice as many customers prefer pepperoni as their favorite topping than those who prefer hamburger.
- C One-half of the customers prefer either pepperoni or cheese as their favorite topping.
- D The number of customers who chose sausage or hamburger as their favorite topping was twice the number of customers who chose mushroom as their favorite topping.

- 2 Laurence has a cylindrical jar that has a volume of 942 cubic inches. If the diameter of the jar is 10 inches, what is the approximate height of the jar?

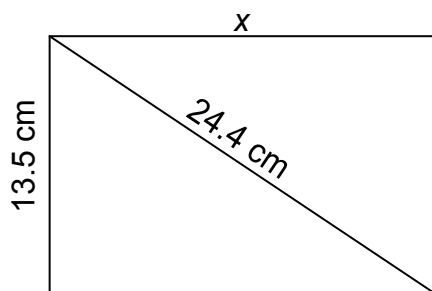
- A 3 inches
- B 9 inches
- C 12 inches
- D 30 inches

- 3 The area of a square is 244 square meters. Which of these is the closest to the length of the side of the square?

- A 15 meters
- B 15.2 meters
- C 15.6 meters
- D 16 meters



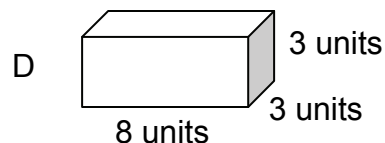
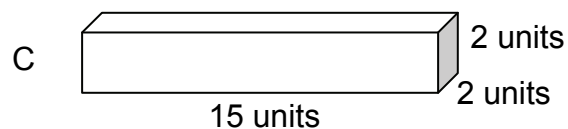
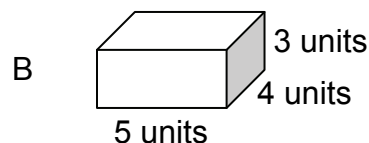
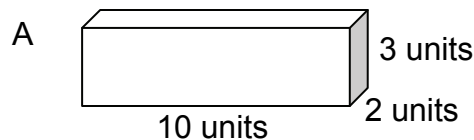
- 4 Shawn drew the rectangle shown below.



Which equation could be used to determine the length of the rectangle?

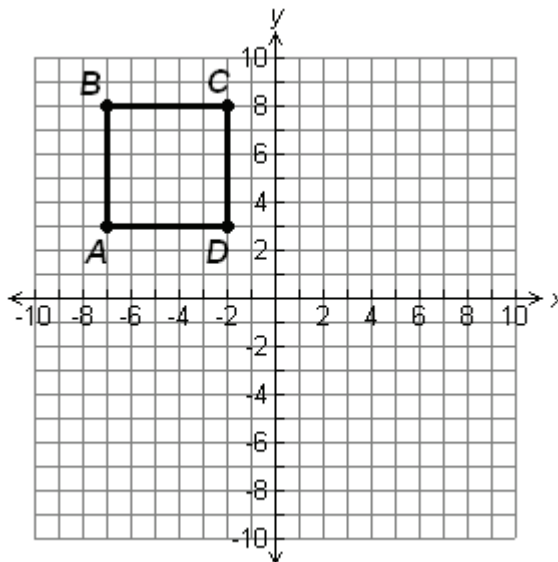
- A $13.5^2 + 24.4^2 = x^2$
- B $x^2 + 13.5^2 = 24.4^2$
- C $x^2 + 24.4^2 = 13.5^2$
- D $x + 13.5 = 24.4$

- 5 A rectangular prism has a surface area of 112 square units and a volume of 60 cubic units. Which of the following could be the prism?





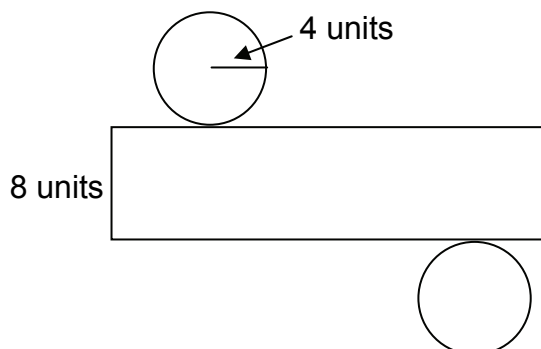
- 6 If rectangle $ABCD$ is reflected across the x -axis, what are the coordinates of point B' ?



- A (7, 8)
- B (8, 7)
- C $(-8, -7)$
- D $(-7, -8)$



- 7 A net of a cylinder is shown below.



What is the approximate surface area of the cylinder?

- A 100.48 square units
- B 200.96 square units
- C 301.44 square units
- D 401.92 square units

- 8 Aaron drew a regular octagon. Each side of the octagon was 3.2 inches. If he wants to dilate the octagon using a scale factor of 5, what will be the length of each side of the dilated octagon?

- A 25.6 inches
- B 16 inches
- C 8.2 inches
- D 0.64 inches

- 9 What is the approximate length of the diagonal of a square that has a perimeter of 28 inches?

- A 19.8 inches
- B 14 inches
- C 9.9 inches
- D 7 inches



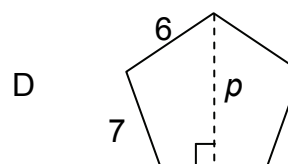
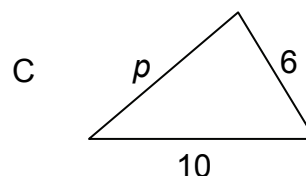
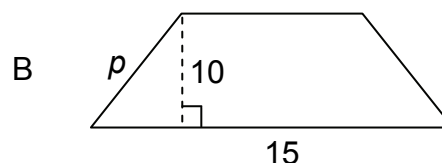
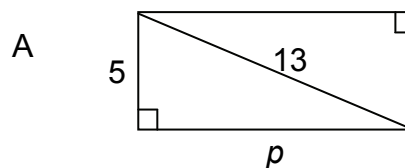
- 10** A snow-cone stand surveyed 500 customers about their favorite snow-cone flavor. If the probability of a person choosing banana as his favorite flavor is $\frac{3}{16}$, about how many of the customers that were surveyed chose banana as their favorite snow-cone flavor?

A 125
B 90
C 75
D 15

- 11** The dimensions of a large triangle are 3 times the dimensions of a small triangle. If the perimeter of the small triangle is 56 centimeters, how could you find the perimeter of the large triangle?

A Multiply 56 by $\frac{1}{6}$.
B Multiply 56 by $\frac{1}{3}$.
C Multiply 56 by 6.
D Multiply 56 by 3.

- 12** Which drawing shows enough information to find the length of line segment p ?

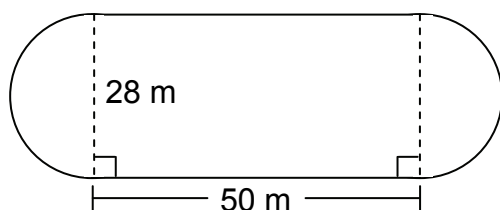


- 13** A large rectangular prism has a volume of 41.6 cubic inches. A small rectangular prism has dimensions that are $\frac{1}{2}$ the dimensions of the large prism. What is the volume of the small prism?

A 20.8 cubic inches
B 10.4 cubic inches
C 5.2 cubic inches
D 2.6 cubic inches

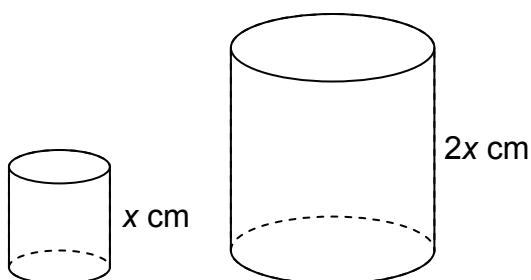


- 14** An indoor track at a health club is shown below.



If Andy runs once around the track, about how far will he have run?

- A 87.92 meters
 - B 100 meters
 - C 143.96 meters
 - D 187.92 meters
- 15** Two similar cylinders are shown below.



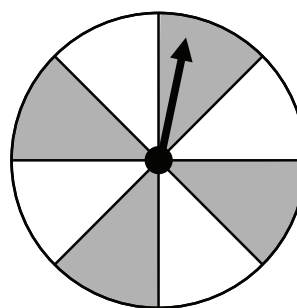
If the volume of the small cylinder is 125.6 cubic centimeters, what is the volume of the large cylinder?

- A 1,004.8 cm³
- B 753.6 cm³
- C 502.4 cm³
- D 251.2 cm³

- 16** A fair coin and a spinner with an equal chance of landing on the numbers 1, 2, 3, 4, 5, and 6 are used in a game. What is the probability of getting an even number on the spinner and heads on the coin?

- A $\frac{1}{12}$
- B $\frac{1}{6}$
- C $\frac{1}{4}$
- D $\frac{1}{2}$

- 17** A carnival spinner has a diameter of 6 feet. To win a prize, the player must have the spinner land on a shaded region.

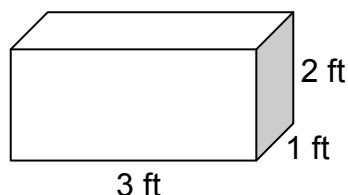


What is the approximate area of the shaded region of the spinner?

- A 113.04 ft²
- B 28.26 ft²
- C 18.84 ft²
- D 14.13 ft²

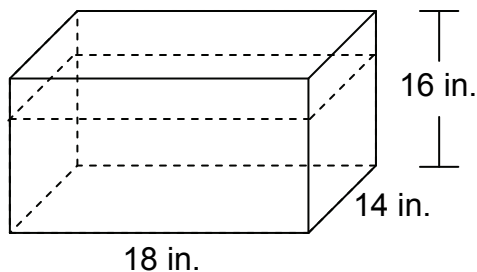


- 18** A model of a cardboard moving box is shown below.



How much cardboard will it take to make the box?

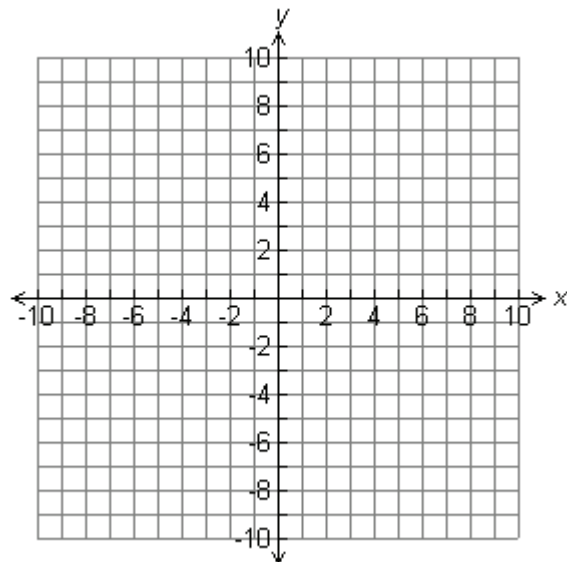
- A 22 square feet
 - B 16 square feet
 - C 13 square feet
 - D 6 square feet
- 19** Monica has a fish tank that is a rectangular prism.



If the water level is 4 inches below the top of the tank, how many cubic inches of water is in the tank?

- A 2,688 cubic inches
- B 3,024 cubic inches
- C 4,032 cubic inches
- D 48,384 cubic inches

- 20** Which ordered pair is located in Quadrant II?



- A $(2\frac{1}{3}, -4.5)$
- B $(-3.6, -2\frac{1}{2})$
- C $(3\frac{3}{4}, 1\frac{1}{5})$
- D $(-2.5, 3\frac{1}{4})$



- 21** The heights of 6 players on a girls' volleyball team are shown in the table.

Volleyball Players

Player	Height (in inches)
Cassie	65
Marissa	60
Kari	63
Lydia	61
Ayesha	62
Maya	64

If the height of another player is 70 inches, which measure of data will change the most?

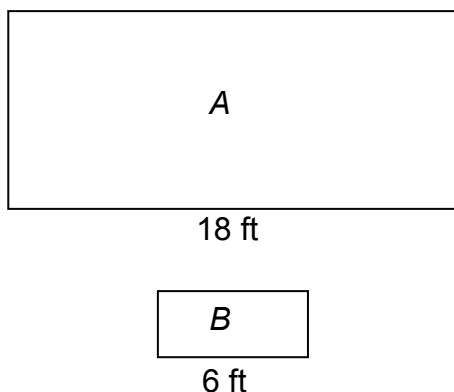
- A None of the measures of data will change.
- B The mode
- C The median
- D The mean

- 22** Coach Miller determined that 114 out of 156 of the students in her gym class signed up for bowling. Based on this information, which statement best represents Coach Miller's data?

- A Less than half of Coach Miller's students signed up for bowling.
- B About 75% of Coach Miller's students signed up for bowling.
- C More than 50 students did not sign up for bowling.
- D About 60% of Coach Miller's students signed up for bowling.



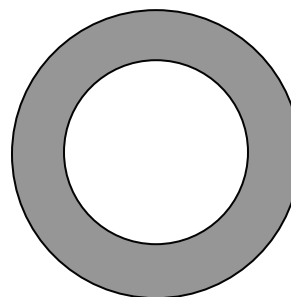
- 23** Amy drew the 2 similar rectangles shown below.



If the area of rectangle *A* is 270 square feet, what is the area of rectangle *B*?

- A 30 ft^2
- B 18 ft^2
- C 15 ft^2
- D 3 ft^2

- 24** The figure shows a circle inside a circle.

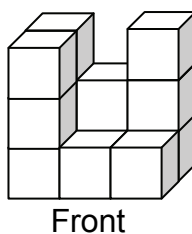


Which procedure should be used to find the area of the shaded region?

- A Find the circumference of the outer circle then add the circumference of the inner circle.
- B Find the circumference of the outer circle then subtract the circumference of the inner circle.
- C Find the area of the outer circle then subtract the area of the inner circle.
- D Find the area of the outer circle then add the area of the inner circle.



- 25** Johanna made a solid figure by stacking cubes. The solid figure is shown below.



Front

Which drawing best represents a side view of this solid figure?

